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TREATMENT OF TRICHOMONAL VAGINITIS

More than 50 different preparations and many plans of treatment are offered for the management of trichomonal vaginitis - a situation which reflects the confusion over both methods of transmission and the management of this condition. Trichomonas vaginalis is found in about 25 per cent of women, but in many of them it causes no symptoms. The presence of Trichomonas vaginalis on a hanging drop or culture (cultures yield many more positive tests than hanging drops) is not diagnostic of Trichomonas vaginalis vaginitis. When pure cultures of this flagellate are inoculated into the vaginas of normal females, either no infection is established or infection may be established without vaginitis; only in the minority of cases does true vaginitis follow.

SOURCES OF INFECTION - Trichomonas vaginalis does not invade the vagina from the gastrointestinal tract. Whether it can be transmitted by infected fomites (bed clothes, garments, etc.) is not known. Coitus is considered a more important factor in transmission, and some physicians consider Trichomonas vaginitis a venereal disease; in one study, semen from the husbands of infected women showed about 30 per cent positive cultures (M. J. Whittington, J. Obst. & Gyn. Brit. Emp., 58:614, 1951). There is no clear answer to the question of whether resistant cases of Trichomonas vaginitis represent cure failures or re-infection. Some physicians advise the use of a condom during coitus, at least during the period of active treatment, to lessen the possibility of re-infection. No method or drug has been found to be truly effective in ridding males of the organism.

The state of therapy is even more confusing than the etiology of this condition. A statement by the Council on Pharmacy and Chemistry of the American Medical Association in 1943 (JAMA, 123:481, 1943) is still valid today: "A review of many reports in medical literature reveals a common failing; methods of treatment are described, but with very incomplete data on number of patients, number of cases (complete), recurrences, number and length of treatments. In relatively few cases are comparisons of different methods made or controls employed...."

THERAPY - Because of such failings, evaluation of therapy is difficult. Since the distressing vaginal irritation and pruritus are believed to be caused by the metabolic products of the organism, it is not surprising that a simple cleansing douche, such as a vinegar douche (two tablespoonfuls per quart of warm water),

often relieves symptoms. In fact, many patients achieve clinical relief of symptoms regardless of the type of treatment involved.

Other recommended agents can be divided into five groups, according to primary action:

Group 1. Topical agents containing an active trichomonacide, usually either an arsenical or a hydroquinone derivative. These include the following arsenicals: Broxolin vaginal cream and tablets (Breon); Carbarsone vaginal powder and suppositories (Lilly); Milibis vaginal suppositories (Winthrop); and Devegan tablets and powder (Winthrop). The following are hydroquinone derivatives: Baculin tablets (Amfre-Grant); Floraquin vaginal tablets and powder (Searle); GHP solution (Int'l Pharm.); Lycinate vaginal tablets (Lloyd); and Triva douche (Boyle).

Group 2. Topical agents claimed to aid in the permanent restoration of normal vaginal pH and flora, such as: Aci-Jel (Ortho); Domeboro powder and tablets for solution (Dome), and Trichotine douche (Fesler).

Group 3. Anti-infective agents for either systemic or topical use, such as tetracyclines, nitrofurans (Tricofuron - Eaton), and Tritheon (Ortho). (Tritheon is offered as a systemic "trichomonacide.")

Group 4. Iodine-containing preparations, such as Betadine vaginal gel, solution and douche (Tailby-Nason); and Vioform insufflate powder and vaginal inserts (Ciba).

Group 5. Topical agents with an osmotic effect, such as Vagisec jelly and liquid (Schmid).

CHOICE OF DRUGS - While all of these agents have their proponents, the general tendency in practice has been in favor of those in groups 1 and 4. Of the drugs in the first group, C. L. Buxton and D. Weinman (Progress in Gynecology, Vol. 3, 1957, p. 393) favor an arsenical in the form of powder insufflation. A vinegar douche is, however, effective in many cases, and may well be tried first in general office practice. Unfortunately, where one agent is ineffective, there is a good chance that no agent will succeed.

Because of the frequency of infection of vulvar and urethral glands, which cannot be reached by local treatment, there is need for an effective and safe agent for systemic treatment. No agent now available meets these requirements.

Although "shot-gun" combinations of topical drugs are promoted as effective for all of the three major types of vaginal infection - bacterial (non-gonorrheal), candidial and trichomonal - there is no proof that any combination is effective for all three. Medication that contains such local anesthetic agents as benzocaine should generally be avoided; these agents are highly antigenic, and may cause allergic reactions more distressing than the original vaginitis. Sensitization reactions may also occur to hydroquinone, arsenicals and organic iodine preparations. All therapeutic agents introduced into the vagina can be irritating and any of them may occasionally cause a local vulvitis and vaginitis more severe than the original infection.

NOLUDAR, A "NON-BARBITURATE" HYPNOTIC

A "short-acting" barbiturate drug such as secobarbital or pentobarbital is usually the first choice of physicians in the treatment of insomnia. When barbiturates are used under the supervision of a physician, and in controlled doses, the danger of addiction is negligible. Hangover depression, irritability and intellectual fuzziness, even with small doses, are unavoidable side effects in some patients, and have led physicians to try chloral hydrate ("unfortunately...considerably neglected since the barbiturates have become popular" - Goodman & Gilman, Pharm. Basis of Therapeutics, p. 139). Many physicians have found that an antihistamine drug which has sedative side effects (such as Benadryl or Pyribenzamine) is sometimes a useful alternative to barbiturates or chloral hydrate for the patient with mild insomnia.

In recent years a number of non-barbiturate sedative-hypnotic drugs have been introduced with the claim that they are as effective as the barbiturates, but without the problem of addiction and side effects (especially hangover) generally associated with barbiturates. One of these, methyprylon (Noludar - Roche), a piperidine derivative, is promoted as "safe, non-barbiturate, non-addictive, eminently free of even minor side reactions."

HYPNOTIC EFFECT - That adequate doses of Noludar induce sleep is confirmed by a number of studies over the past several years. One well-controlled investigation of the hypnotic effects of pentobarbital, secobarbital, phenobarbital, meprobamate, and Noludar, each drug given in recommended doses and in doses twice as large, showed all the drugs to be superior to placebos in both induction and duration of sleep. Noludar in a dose of 250 mg. produced results indistinguishable from those of 100-mg. doses of pentobarbital or secobarbital (L. Lasagna, J. Chronic Dis., 3:122, 1956). In another controlled study (T. J. Thomson, Brit. Med. J., 2:1140, 1958), 400-mg. doses of methyprylon were found to be comparable in hypnotic effect to 100-mg. doses of secobarbital.

TOXICITY AND SIDE EFFECTS - As with the barbiturates, side effects do occur, and include headache, nausea, hangover and vertigo. A few instances of pruritus, rash, excitation, and diarrhea have been reported (O. Brandman, et al., J. Med. Soc. N.J., 52:236, 1955); there were no untoward effects on renal function or the hematopoietic system, though the January 1960 Report of the Subcommittee on Blood Dyscrasias of the AMA Council on Drugs lists one case of leukopenia produced by Noludar.

In summary, Noludar appears to be a relatively safe and effective hypnotic. In recommended dosage, hangover and other side effects appear to be neither more nor less frequent or severe than with the barbiturates. Although instances of addiction have not been reported, large doses taken over a long period would probably cause addiction.

When capsules are prescribed in quantities of 30, 300 mg. of Noludar costs about 13¢, and 100 mg. of pentobarbital or secobarbital, about 4¢. When pentobarbital is prescribed as Nembutal (Abbott) or secobarbital as Seconal (Lilly), the cost per capsule may be two or three cents higher.

FLUOTHANE

Despite the frequent and enthusiastic introduction of new general anesthetic agents, few have withstood the test of time. A recent exception is halothane (Fluothane - Ayerst), which has been extensively studied over the past four years.

The two main advantages of Fluothane are, first, that it is a potent non-explosive inhalation anesthetic, and, second, that its effects are readily and rapidly reversed, since it is not metabolized in vivo. Its use is especially advantageous in situations where other anesthetic agents would present an explosive hazard from cautery, x-ray machines, etc.

The major disadvantages of Fluothane are, first, that it depresses the cardiovascular system and so increases the incidence of hypotension, and, second, that there is relatively little margin of safety between its anesthetic concentration (about 1.5 to 2.0 vol. per hundred) and its lethal concentration (about 2.5 to 3.0 vol. per hundred). This latter disadvantage has been successfully overcome by the development of special vaporizers which allow accurate estimation of the inhaled concentration; because of its high potency, however, it must be emphasized that Fluothane should be administered only by experienced persons using special equipment.

The effect of Fluothane on the liver is the same as that seen with such agents as ether and cyclopropane. It does produce respiratory depression, and the anesthetist must compensate for this by artificially increasing ventilation during administration, especially when deep levels of anesthesia are required. It has no more adverse effect on cardiac rhythmicity and renal function than do many other commonly used general anesthetics. It has no effect on the hematopoietic system.

OSTAMER

Ostamer (Merrell), a polyurethane polymer publicized as a "bone glue," has been advocated for the treatment of various types of fractures. The product has not yet been released for sale, but it has for some time been available to surgeons for investigative purposes. Doubts have been voiced about the safety and effectiveness of this agent, and it is the opinion of Medical Letter consultants that it should not be used even for investigative purposes except in research centers where a maximum of useful data can be gained and the risks minimized.

Space does not permit an extended discussion of the experience with this agent, but readers are referred to the May, 1960 issue of the American Journal of Surgery, which carries two papers on the clinical use of Ostamer presented at a meeting of The American Association for the Surgery of Trauma on September 25, 1959. The Journal also carries the discussion of these papers. Experiences which have been reported subsequently have shown an appreciable incidence of complications from the use of Ostamer, and the possibility that it can be carcinogenic, suggested by findings in animal experiments, cannot be dismissed without prolonged study.

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